



Wireless TimeClock WTC Configuration Guide

Version 2.1.0

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Table of Contents

Overview	1
Features	1
Document Conventions	2
Help from Technical Services	2
Technical Services Department	2
Installation	3
Prepare	3
Accessories	3
Connect the Wiring	4
Install the Station	5
Attach the Faceplate	5
Replace the Battery	6
User Interface	6
Keypad Navigation	6
Home Screen	7
Getting Started	7
Definitions	8
Organize	8

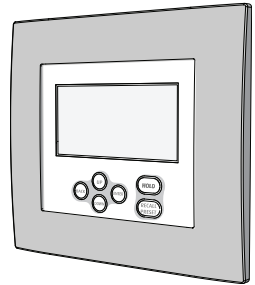
Link and Configure	9
About Events	9
Event Actions	9
Stage an Event	10
Manual Override	10
Temporary Configuration	10
Configuration Parameter	11
Main Menu	12
Schedule an Event	12
Define a Scene Action	12
Define an OFF Action	13
Define an ON to Level Action	13
Define a Mask Action	14
Define a Temp Config Action	15
TimeClock Settings	17
Current Time	17
Time Style	17
Current Date	17
Time Zone	18
Latitude and Longitude	18
Daylight Saving Time	18
Manual DST Dates	19
Sweep Interval	19
Timed Hold	19
Flick Warn	20
Holiday Shut-Off	20
Configure Holiday Groups	20

Holiday Shut-Off Duration	21
Link or Unlink	21
System	21
Restore Defaults	21
Reboot	22
Show Seconds	22
About	22
Hold Options	22
Timed Hold	23
Indefinite Hold	23
Recall Preset	23
Record of Numbered Elements	24
Configured Events 1 to 50	24
Configured Groups 1 to 24	25
Configured Scenes 1 to 15	25
Menu Flow Examples	26
Compliance	29
FCC Compliance	29
ISED Compliance	29
Conformité ISDE	29

Overview

The Wireless TimeClock (WTC) provides effortless time-based control for your Echoflex solution.

Its comprehensive event scheduling capabilities, powerful grouping features, and masking logic maximize energy efficiency to meet Title 24, IECC, and ASHRAE-90.1 energy requirements. The six-button user interface and large back-lit display allow for simple setup and operation.



This guide describes the procedures to install and configure the WTC for use with linked devices that are part of an Echoflex solution. The product package includes the TimeClock, 24 V power pigtail, a battery, four screws, eight receptacle spacers, and two WAGO® connectors.

Features

- Create and control 15 different scenes for up to 24 groups
- Schedule and connect up to 50 events across 24 separate groups
- Schedule temporary configuration settings
- Link and group up to 20 controllers
- Meets California Title 24, IECC, and ASHRAE 90.1 requirements
- Astronomical timeclock schedule with before/after sunset or sunrise calculation based on latitude/longitude settings
- 24-hour real-time clock with user configurable Daylight Saving Time
- Recurrent settings: every day, weekdays, weekends, or day of week
- Hold feature suspends scheduled events for up to two hours
- Simple manual control of scenes with overrides
- Resumes program automatically after power loss
- Backlit graphical LCD display
- Mounts in industry-standard two-gang electrical box



Note: *Garibaldi Pro software is required to create controller groups and edit default lighting levels for custom scenes. For information about Garibaldi Pro or pre-commissioning services that provide complete system solutions, contact Echoflex. Garibaldi Pro is available for download from the Echoflex website at echoflexsolutions.com.*

Document Conventions

Configuration parameters are emphasized in *italics*. Switch actions (ON/OFF) and relay events (lights ON/OFF) are written in ALL CAPS. Button names appear in [Brackets] and key terms in the interface appear in **Bold**.

This guide uses the following conventions to draw your attention to important information.



Note: *Notes are helpful hints and information that is supplemental to the main text.*



CAUTION: *A Caution statement indicates situations where there may be unwanted consequences of an action, potential for data loss or an equipment problem.*



WARNING: RISK OF ELECTRIC SHOCK! This warning statement indicates situations where there is a risk of electric shock.

All Echoflex documents are available for free download from our website: echoflexsolutions.com. Please email comments about this manual to: TechComm@etconnect.com.

Help from Technical Services

If you are having difficulties that are not addressed by this document, contact Echoflex support at service@echoflexsolutions.com or the main website at echoflexsolutions.com. If none of these resources are sufficient, contact Technical Services directly at the office identified below.

- When calling for help, take these steps first:
- Prepare a detailed description of the problem
- Be near the equipment for troubleshooting
- Find your notification number if you have called in previously

Technical Services Department

3031 Pleasant View Road
Middleton, WI 53562
800-775-4382 (USA, toll-free)
+1-608 831-4116
service@echoflexsolutions.com

Installation



Note: *Installation must follow all national and local codes for electrical equipment.*

Prepare

To ensure optimal function, consider the installation environment and the following guidelines:

- Indoor use only. Operating temperature 0°C to 40°C (32°F to 104°F), 5%–95% relative humidity (non-condensing).
- High density construction materials and large metal appliances or fixtures in the space may disrupt wireless reception.
- Install the WTC within range of linked lighting controllers, 24 m (80 ft) unobstructed view. Consider adding a repeater to extend the wireless signal, if required.
- Ensure the location balances requirements for manual access and for security. Consider adding a locking cover.
- External antenna options include extension cables and a magnet-mount antenna for installation locations with poor wireless reception.
- Can be surface-mounted or flush-mounted in an industry standard two-gang electrical box (not provided). The box must be installed plumb and square. Ensure it is clean and free of obstructions to accommodate the cable if using an external antenna.
- Provide a 24 V power supply connection to the target two-gang electrical box.
- Pull the plastic tab to activate the installed CR2032 battery. The battery is not required to run the Wireless TimeClock, it is only used to maintain the time in case of a power outage.

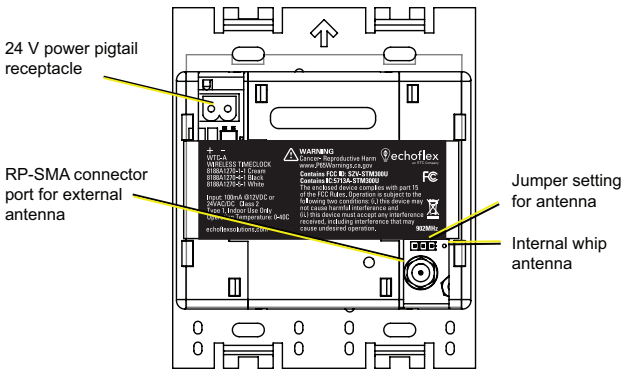
Accessories

The following accessories are sold separately. Contact Echoflex for more information.

- External antenna extension kit, part number 8186K1001.
- NP-SMA antenna cable extension 21.6 cm (8.5 in), part number N1124.
- NP-SMA antenna cable extension 10.7 m (35 ft), part number N1125.
- Tamper-proof 2-gang locking cover, part number 7181A1072.

Connect the Wiring

The WTC ships with a 24 V power terminal strip with wire pigtail, spacers, and all required screws and connectors for the installation.



The antenna jumper is set to use the internal whip antenna by default, position 2 and 3. If your installation uses the external antenna option, adjust the jumper position to 1 and 2 (move it left).

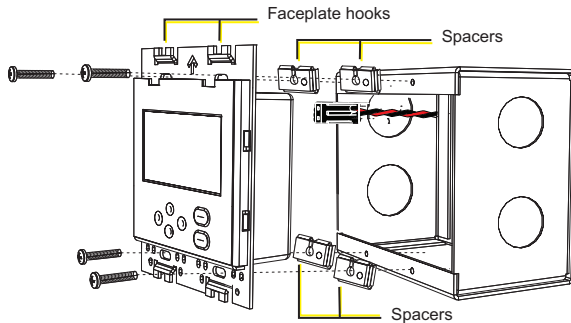
1. Pull the two 24 V power supply wires into the electrical box and strip 11 mm (7/16 in) of insulation.
2. Strip 11 mm (7/16 in) of insulation from both the red and black pigtail wires.
3. Use the WAGO connectors provided to connect the power pigtail and the power supply output wires. Use one WAGO for the red wire (positive +) and one for the black wire (negative -). Open the terminal levers on the WAGO connector and insert the power supply wire and the lead from the pigtail into the terminals, then close the levers. Tug the wires to ensure they are secure.
4. Connect the two-pin connector to the power pigtail receptacle on the station.
5. If using the external antenna option, connect the patch cable to the RP-SMA connector port. Ensure the jumper is set to position 1 and 2.



Note: If using the External Antenna Extension kit, the connection for the flexible coaxial patch cable (part number N1124) may be outside the electrical box. See [Accessories](#).

Install the Station

Receptacle spacers are provided to help align the station flush against the wall in flush-mount applications. The spacers are not required when installing the station into a surface-mount electrical box.

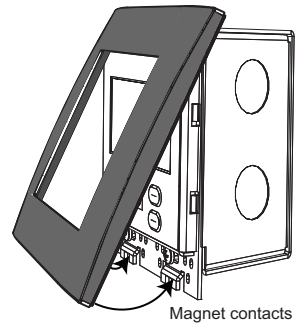


1. Insert the station and the connected wiring in the electrical box.
2. Fold spacers as needed to achieve the thickness required to fill the gap between the station, wall surface, and the electrical box.
3. Secure the station in place using the four screws provided. If using spacers, insert the screws through the spacers.
4. Use a level to align the station square to the wall. Adjust spacers as required so the faceplate fits flush against the wall.
5. Shape the internal whip antenna into a "J" or hockey stick with the tip pointing up an away from the metal mounting bracket. Ensure the tip of the antenna is not touching any metal.

Attach the Faceplate

The faceplate is secured to the station with two magnets at the bottom.

1. Hook the top of the faceplate into the tabs at the top of station's metal plate.
2. Ensure the whip antenna is not pinched and the tip is not touching any metal.
3. Close the bottom of the faceplate to engage the magnets and secure it in place.

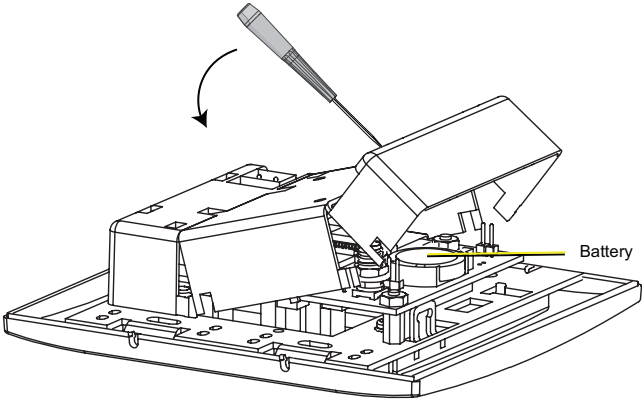


Note: A two-gang locking cover can be installed to prevent tampering. See [Accessories](#).

Replace the Battery

The CR2032 battery is only used to maintain time in case of a power outage. Estimated battery life is up to 10 years, depending on usage. To replace the battery:

1. Remove the faceplate and unscrew the station from the electrical box to access the back cover.
2. Unplug the pigtail connection from the receptacle, and the RP-SMA connector, if using.
3. Insert a screwdriver into one of the holes on the side of the back cover and pry carefully to free the side. Repeat to free the other side. The back cover folds into three sections.



4. Remove the cover and insert the new battery under the clip with the positive side (+) up.
5. Replace the cover, restore the connections, reinstall the station, safely position the whip antenna, and attach the faceplate.

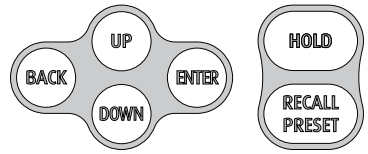
User Interface

The display screen is backlit for easy viewing. Press any button on the keypad to wake the display and backlight. The backlight sleeps after two minutes of inactivity.

Keypad Navigation

The user interface has an easy-to-use keypad that includes [Up], [Down], [Back], and [Enter] buttons to navigate configuration settings (see [Main Menu on page 12](#)). The [Hold] button suspends scheduled events (see [Hold Options on page 22](#)). The [Recall Preset] button activates defined scene settings (see [Recall Preset on page 23](#)).

Use the [Up] or [Down] buttons to scroll through menu levels and options. Use the [Enter] button to make a menu selection or to set a configuration parameter. Press [Back] to exit a menu or cancel a change without saving.

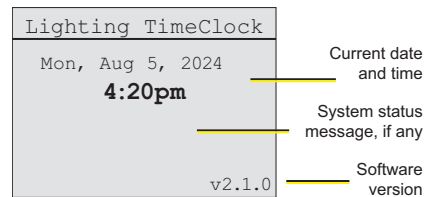


Home Screen

The Home Screen displays the date and time and system messages, such as active Holds. It reverts to dimmed sleep mode after two minutes of keypad inactivity. Press the [Back] button to wake up the Home Screen.

To change the display contrast, press and hold the [Back] button while tapping [Up] or [Down] on the keypad.

To return to the Home Screen from any menu level, press [Back] until you completely exit the menu structure.



Getting Started

The WTC is part of a designed solution made up of connected devices. It coordinates the lighting controllers by setting levels, recalling lighting scenes, and can send instructions to ignore linked sensors or stations.

In addition to other settings, Echoflex controllers each have 15 preset light intensity levels that are configurable from 0% to 100%, and one preset level reserved for OFF that is not configurable.

Presets are used to create lighting scenes. For Echoflex controllers that support tunable white fixtures, presets can be used to set the color temperature as part of the lighting scene.

A lighting space may be divided into multiple zones and include different types of fixtures. To provide independent control of each zone or class of fixture, Echoflex controllers can be assigned to logical groups. Up to 24 groups are supported and each controller can be a member of one or more groups. Controller groups can be set independently or in combination with one another. In Echoflex architecture, lighting scenes are created by instructing groups of controllers to activate one of their presets. The WTC can be used to recall scenes on a schedule. Multi-Scene Stations (MSS) can be used to recall scenes manually.



Note: *Garibaldi Pro is required to configure presets and controller groups. Controllers are associated with Group 1 by default.*

Definitions

Scene – a lighting scenario that describes the overall lighting set in a space. A scene may require lighting fixtures to be ON at different intensity levels, OFF, or color temperature values to be set. A space may have several different scenes. For example, a conference room could have scenes for general lighting, presentations, movie viewing, and video conferencing.

Preset – a configured setting that stores a value between 0% and 100% in an Echoflex controller. Echoflex controllers have 15 configurable presets (and one reserved for zero, or OFF). Use Garibaldi Pro software to change preset defaults and create a customized configuration.

Group – a logical group of Echoflex controllers, numbered between 1 and 24. Echoflex controllers can be member of one or more of the 24 groups.

Event – a scheduled lighting instruction for a group of controllers.

Organize

Proper planning is required to design the lighting effects and schedules for different scenes that light a space.

Consider creating a plan to manage the lighting effects you want to control. You may need different plans for different building types, like a lecture hall, office, or school. The settings are organized with simple numbering systems that can be customized for every installation.

Element	Description	Example Usage
Events 1–50	A defined lighting event for a specified group that runs on a configured schedule.	Consider creating a pattern, such as: Scheduling ON/OFF Events: 1–10 Scheduling Scenes: 11–26 Device Masking: 27–40 Special: 41–50.
Groups 1–24	A defined area or role to coordinate selected controllers. Each controller is associated with Group 1 by default.	Controllers can be associated with multiple groups. A group should relate to a common area in a facility that includes several controllers. Create a name to identify each group, for example: Group 1 = Reception Group 2 = Open Office Area Group 3 = Corridors Group 4 = Exterior Lights
Scenes 1–15	A defined lighting level that can be used in a scheduled event or manually activated.	An event can use a scene number to set the lighting level on a schedule. Buttons on a Scene Station can be used to manually activate a scene. A recalled preset combines a group number (target controllers) and a scene number to create the lighting effect.



Note: Consider recording the assignments that you create for each numbered element. See [Record of Numbered Elements on page 24](#).

Link and Configure

The WTC must be linked to the target lighting controllers to create lighting effects using scheduled events and scenes. Recommended steps, if the WTC is not pre-commissioned:

1. Configure TimeClock defaults, see [TimeClock Settings on page 17](#).
2. Link target controllers, see [Link or UnLink on page 1](#).
3. Determine the groups required for the space you want to control.
4. Determine each controller's preset lighting levels for the scene.
5. Define and schedule events, see [About Events below](#).

The WTC can be linked to a project's lighting controllers using Echoflex pre-commissioning services. Contact customer service for information about pre-commissioning services.

About Events

The WTC supports up to 50 programmed events that can be scheduled to occur and re-occur every day, on weekdays, on weekends, or on individual days of the week.

Events can be set to occur at a particular time of day by setting a specific time, or by setting an offset time based on an astronomical event, such as before sunrise, after sunrise, before sunset, or after sunset. Events can also be connected to create a compound event, where one event triggers other events to execute, see [Stage an Event on the next page](#).

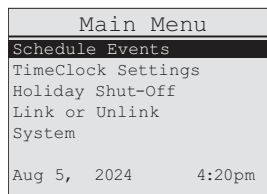
Event Actions

An event is controlled by the type of Action selected. Types of Action include:

Scene - defines the light intensity and color temperature for an event managed by a designated group. The effect is created by activating configurable presets stored in each controller. If a controller does not support light intensity and color temperature features, its lighting control in an event is either ON or OFF.

OFF - defines an event that turns OFF controllers in a designated group.

ON to Level - defines the light intensity or color temperature for an event managed by a designated group. For example, ON to Level can be used to set the output for controllers in a group to 50%.



Mask - defines an event where controllers in a group ignore input from a type of transmitter. For example, a Mask will ensure that vacancy detected by an occupancy sensor does not turn the lights OFF during normal office hours.

Temp Config - defines a temporary configuration for a designated group of controllers and channel(s). For example, modify the time-out period during working hours so that lights turn OFF when a space is vacant after two hours, not the standard configuration of 15 minutes. See [Temporary Configuration on page 10](#).

None - identifies an event number that has no defined Action; it has no effect. The factory default for all event numbers is None.

Stage an Event

The staged event feature can be used to connect multiple events in a series. It triggers one event to activate a sequence of other events.



Example: *You can create Event 1 to set a scene for a group on Tuesday mornings. If you want another scene for another group at the same time, defined as Event 2, you can simply enter Event 2 as the Next Event in the definition for Event 1.*

Using this feature effectively requires some organized planning, so consider using the planning guide. See [Compliance on page 29](#).

Manual Override

Events are created on a schedule for a purpose and are intended to stay in effect. However for safety reasons, any active event can be replaced by a manual control setting. For example, janitorial staff turn the lights ON. The Sweep feature repeats the event setting to remove any manual overrides. See [Sweep Interval on page 19](#). Even without a Sweep, manual control settings are replaced by the next scheduled event, unless there is an active Hold in place.

Temporary Configuration

Temp Config is a type of Action that provides a means to temporarily modify some configuration settings on a group of controllers.

For example, standard behavior for controllers is to shut OFF the lights when a space becomes unoccupied. Instead of shutting the lights OFF completely, Temp Config can be used to dim the lights to a specified level.

Defining two separate Actions, a Set and a Revert, in a pair of events provides a temporary configuration. Using the example above, a Temp Config Set Action can be used to invoke the “dim lights when unoccupied” behavior at the beginning of the work day. After hours, a Temp Config Revert Action is used to return the controller to its default behavior (lights OFF when the space is unoccupied).

Configuration Parameter

The Configuration Parameter number specifies which controller setting is to be temporarily altered. The table below describes the defined Config Param numbers.

Config Param	Setting Description	Value Description
1	Partial-ON Enable	Yes or No
2	Partial-ON Level	Percentage: 0 to 100%
3	Partial-OFF Enable	Yes or No
4	Partial-OFF Level	Percentage: 0 to 100% (20% default)
5	Timed Switch On Duration	Timer setting in seconds (e.g.: 00600 for 10 min)
6	Daylighting Manual Override Enable	Yes or No
7	Daylighting Manual Override Timeout	Timer setting in seconds (e.g.: 00600 for 10 min)
8	Maximum Dimming Level	Percentage
9	Occupancy Timer Timeout	Timer setting in seconds (e.g.: 00900 for 15 min)
10 to 99	Unspecified parameters	TBA future development



Note: *To learn more about the controller settings that can be modified, and how they affect controller behavior, contact your Echoflex support representative.*

Main Menu

The Main Menu provides access to set up and schedule events, settings, and link controllers. Press [Up], [Down], or [Enter] to wake up and navigate the Main Menu screen.

To navigate the menu options, press [Up] or [Down] to scroll and press [Enter] to make a selection. Press [Back] to cancel without saving. See [Menu Flow Examples on page 26](#) for a selection of submenus and navigation.

Schedule an Event

1. Select **Schedule Events** from the Main Menu and press [Enter] to modify the **Event Number**.
2. Press [Up] or [Down] to scroll the numbers, and press [Enter] to select.
3. Press [Down] to focus on **Action** and press [Enter] to modify.
4. Use [Up] or [Down] to scroll through the actions: **Scene**, **OFF**, **ON to Level**, **Mask**, **Temp Config**, and None. See the following steps based on your selection.

Define a Scene Action

1. Press [Enter] to select **Scene** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select a **Scene Number** from 1 to 15, and press [Enter] to select.
4. Select a type of day for **Recurrence**.
 - None, Every day, Weekdays, Weekends, or a day of the week. Select *None* if the event is going to be used in a compound event. If not *None*, define the setting for **When** and **Time** or **Offset**.
5. Select a reference time of day for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).
6. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
7. Select disable or enable **Sweep** to reapply event settings, removing any manual settings.
 - Enable or Disable. If enabled, specify the **Sweep Duration** 0h00m, maximum 24h59m. See [Sweep Interval on page 19](#) to set the interval.

Schedule Event	
Event Number:	1
Action:	Scene
Group Number:	4
Scene Number:	10
Recurrence	Tuesday
When:	Time of Day
Time:	12:00am
Sweep:	Enabled
Sweep Duration:	12h00m
Next Event:	None

8. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

Define an OFF Action

1. Press [Enter] to select **OFF** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select a type of day for **Recurrence**.
 - None, Every day, Weekdays, Weekends, or a day of the week. Select *None* if the event is going to be used in a compound event. If not *None*, define the setting for **When** and **Time** or **Offset**.
4. Select a reference time of day for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).
5. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
6. Select disable or enable **Sweep** to reapply event settings, removing any manual settings.
 - Enable or Disable. If enabled, specify the **Sweep Duration** 0h00m, maximum 24h59m. See [Sweep Interval on page 19](#) to set the interval.
7. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

Schedule Event	
Event Number:	2
Action:	OFF
Group Number:	20
Recurrence	Monday
When:	Time of Day
Time:	12:00am
Sweep:	Enabled
Sweep Duration:	2h00m
Next Event:	18



Note: For scheduled OFF events, consider enabling Flick Warn. See [Flick Warn on page 20](#).

Define an ON to Level Action

1. Press [Enter] to select **ON to Level** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select a **Level** from 0% to 100%, and press [Enter] to select.
4. Select a type of day for **Recurrence**.

Schedule Event	
Event Number:	3
Action:	ON to Level
Group Number:	6
Level:	5%
Recurrence:	Weekdays
When:	Before Sunrise
Offset:	1h15m
Next Time:	(7:58am)
Sweep:	Disabled
Next Event:	None

- None, Every day, Weekdays, Weekends, or a day of the week. Select *None* if the event is going to be used in a compound event. If not *None*, define the setting for **When** and **Time** or **Offset**.
5. Select a reference time of day for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).
 6. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
 7. Select disable or enable **Sweep** to reapply event settings, removing any manual settings.
 - Enable or Disable. If enabled, specify the **Sweep Duration** 0h00m, maximum 24h59m. See [Sweep Interval on page 19](#) to set the interval.
 8. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

Define a Mask Action



Note: To Mask multiple transmitters, create a separate event for each Mask Type.

1. Press [Enter] to select **Mask** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select a **Mask Type** for the controller to lockout and press [Enter].
 - Switch, Photo, or Occupancy.
4. Enter the hours and minutes for the **Mask Duration** to be in effect, maximum 17 hours 59 minutes.
5. Select a type of day for **Recurrence**.
 - None, Every Day, Weekdays, Weekends, or a day of the week. Select *None* if the event is going to be used in a compound event. If not *None*, define the setting for **When** and **Time** or **Offset**.
6. Select a reference for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).

Schedule Event	
Event Number:	4
Action:	Mask
Group Number:	24
Mask Type:	Switch
Mask Duration:	0h00m
Recurrence	Tuesday
When:	Time of Day
Time:	12:00am
Next Event:	9

7. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
8. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

Define a Temp Config Action

A Temporary Configuration action is controlled by a Set and a Revert action type. Both types must be defined. See [Temporary Configuration on page 10](#) for more information.

Temp Config Set

1. Press [Enter] to select **Temp Config** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select **Set** as the type to define a new configuration.
4. Enter a **Config Param** number that corresponds to the target configuration setting, e.g.: 2 is for Partial-ON Level. See [Configuration Parameter on page 11](#).

Schedule Event	
Event Number:	5
Action:	Temp Config
Group Number:	3
Set/Revert:	Set
Config Param	5
Value:	06000
Channel:	All
Recurrence:	None
Next Event:	None



Note: For settings that need to be enabled and have a value, create one event to enable the setting and create a second event to enter the value. The two events can then be connected using Next Event.

5. Enter a **Value** for the Config Param selected. For example, enter 20% for a Config Param that controls a light level, or 00900 to indicate the number of seconds for a Config Param that controls a timer.



Note: Timer values are five-digits that must be edited individually. Press [Enter] after each of the digits to scroll to the right and save the total number of seconds.

6. Enter the controller **Channel** number that this event addresses. From 0 to 254, or All for all channels.
7. Select a type of day for **Recurrence**.

- None, Every Day, Weekdays, Weekends, or a day of the week. Select *None* if the event is going to be used in a compound event. If not *None*, define the setting for **When** and **Time** or **Offset**.
8. Select a reference for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).
 9. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
 10. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

Temp Config Revert

1. Press [Enter] to select **Temp Config** as the event **Action**.
2. Select a **Group Number** from 1 to 24, and press [Enter] to select.
3. Select **Revert** as the type to restore the default configuration.
4. Select Yes or No for **Revert All** to control what you want to revert.
 - If No, select the **Config Param** you want to revert. See [Configuration Parameter on page 11](#).
5. Select a reference number for **Revert When**.
 - 0 = Immediately
 - 1 = Trans to Occupied
 - 2 = Trans to Unoccupied
 - 3 = On Switch Action (a message sent from a switch)
 - 4 = On Scheduled Action (a message sent from a WTC)
 - 5 to 127 = Reserved for future use
6. Enter the controller **Channel** number that this event addresses. From 0 to 254, or *All* for all channels.
7. Select a type of day for **Recurrence**.
 - None, Every Day, Weekdays, Weekends, or a day of the week. If not None, define the setting for **When** and **Time** or **Offset**.
8. Select a reference for **When**.
 - Time of Day, or an astronomical setting (Before/After Sunrise/Sunset).

Schedule Event	
Event Number:	6
Action:	Temp Config
Group Number:	3
Set/Revert:	Revert
Revert All:	No
Config Param:	5
Revert When:	1
= Trans to Occupied	
Channel:	2
Recurrence:	None
Next Event:	None

9. Set a **Time** or an **Offset**, depending on the **When** option you selected.
 - If Time of Day was selected, specify the **Time** in hours and minutes 00h:00m (am or pm).
 - If an astronomical setting was selected, specify the **Offset** hours and minutes from the astronomical setting. For example, if Before Sunset is selected, choose how long before sunset you want the event to execute. The **Next Time** is calculated and displayed in parentheses (##:## am).
10. Select **Next Event** and enter an Event Number from 1–50, if you want to create a compound event.

TimeClock Settings

The TimeClock Settings menu provides access to display preferences such as current Time and Style (12 Hour or 24 Hour clock), Date, Time Zone, Daylight Saving Time (DST) location details, Sweep, Hold duration, and Flick Warn. This menu also provides the option to restore the factory or pre-commissioned defaults.

TimeClock Settings	
Time:	4:20pm
Time Style:	12 Hour
Date:	Aug/ 5/ 2024
Time Zone:	GMT -6
Latitude:	43 8 N
Longitude:	89 20 W
DST:	US
Manual DST Dates	
Sweep Interval:	10 min
Timed Hold:	120 min
Flick Warn:	Yes

Current Time

1. Select **TimeClock Settings** from the Main Menu and press [Enter] to modify the **Time**.
2. Press [Up] or [Down] to scroll the hour, and press [Enter] to select.
3. Press [Up] or [Down] to scroll the minutes, and press [Enter] to select. If the **Time Style** is 12 Hour, am or pm can be set.



Note: To control the display of seconds in the time, see [Show Seconds on page 22](#).

Time Style

Set the time style display to either a 12-hour or 24-hour clock.

1. Select **Time Style** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll 12 Hour or 24 Hour, and press [Enter] to select.

Current Date

1. Select **Date** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll the month, and press [Enter] to select.
3. Press [Up] or [Down] to scroll the day, and press [Enter] to select.
4. Press [Up] or [Down] to scroll the year, and press [Enter] to select.

Time Zone

For accurate real-time and astronomical events, the WTC must be set to reflect your current time zone. Select the time zone based on hours offset from Greenwich Mean Time (GMT). See greenwichmeantime.com for a complete listing of GMT time zones.

1. Select **Time Zone** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll the **GMT** time zone offset, and press [Enter] to select.

Latitude and Longitude

Set an accurate location to properly calculate sunrise and sunset times.

1. Select **Latitude** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll the degrees, and press [Enter] to select.
3. Press [Up] or [Down] to scroll the minutes, and press [Enter] to select.
4. Press [Up] or [Down] to scroll either **N** (North) or **S** (South), and press [Enter] to select.
5. Select **Longitude** from the TimeClock Settings menu and repeat steps 2 through 4 above for **E** (East) or **W** (West).

Daylight Saving Time

Set the current Daylight Saving Time (DST) location to use the default Daylight Saving Time dates for the selected location.

1. Select **DST** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll to the **Daylight Saving Time** options (None, US, EU, and Manual), and press [Enter] to select.

Manual DST Dates

Set custom or manual Daylight Saving Time dates as needed.

1. Select **Manual DST Dates** from the TimeClock Settings menu, and press [Enter] to select. The manual DST Dates menu displays the current DST start and end dates.
2. Press [Enter] to set new start and end dates.
3. Press [Up] or [Down] to scroll, and [Enter] to set the **DST Start Date** settings: Month, Day of Week, and Occurrence.
4. Press [Up] or [Down] to scroll, and [Enter] to set the **DST End Date** settings: Month, Day of Week, and Occurrence.

DST Start Date	
Month:	March
Day of week:	Sunday
Occurrence:	Second
DST End Date	
Month:	November
Day of week:	Sunday
Occurrence:	First

Sweep Interval

The Sweep feature ensures that an event setting remains in effect—a reinforcement in case a manual setting overrides the event. The Sweep Interval defines the frequency that the event settings are reset, maximum 360 minutes. For example, if the Sweep Duration is two hours and the Sweep Interval is 10 minutes, a total of 12 Sweeps would be executed after the scheduled event has occurred.

For the Sweep Interval to be in effect, the scheduled event must have Sweep enabled with a set duration. The Sweep feature is available for Action types **Scene**, **ON to Level**, and **OFF**. See [Define an ON to Level Action on page 13](#) for an example.

1. Select **Sweep Interval** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll to the target **Sweep Interval** frequency, and press [Enter] to select.

Timed Hold

The Timed Hold feature sets the duration of the Hold that suspends all scheduled events. Timed Hold is set to 120 minutes by factory default to comply with energy conservation standards. The duration can be set to any value from 10 to 360 minutes, in 10-minute increments.

1. Select **Timed Hold** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll to the target **Timed Hold** duration, and press [Enter] to select.

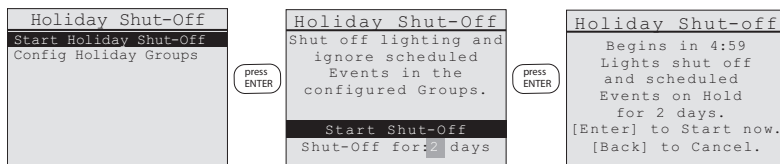
Flick Warn

Flick Warn is a feature that provides visual warning to occupants in a space when the next scheduled event is set to turn the lights OFF. See [Define an OFF Action on page 13](#). When enabled, the lights flick OFF and ON once when the OFF action is pending, and stay ON for the duration of the controller's configured Flick Warn timer (default 60 seconds). Flick Warn allows an occupant sufficient time to use a manual lighting control to turn the lights ON and override a pending OFF action.

1. Select **Flick Warn** from the TimeClock Settings menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll **Yes** or **No**, and press [Enter] to select.

Holiday Shut-Off

The Holiday Shut-Off feature provides a way to turn lights OFF and suspend scheduled events (per group) for a specified period of time (1–7 days). The default duration is one day.



When Start Shut-Off is selected, a five-minute countdown begins. At any time during this countdown, the Holiday Shut-Off can be canceled by pressing [Back].

After five minutes have lapsed, the Shut-Off executes an OFF command for the specified groups and the Home Screen shows the time remaining before the Holiday Shut-Off expires. To reinstate the normal event schedule, press [Hold].

Configure Holiday Groups

Each group can be individually configured to be excluded from the Holiday Shut-Off schedule. By default, every group is shut OFF by the Holiday Shut-Off schedule. To exclude a group, set the group to Unaffected so the group's scheduled events execute normally.

1. Select **Holiday Shut-Off** from the Main Menu and press [Enter].
2. Scroll to **Config Holiday Groups** and press [Enter]. The group numbers are listed with their current Shut-Off setting.
3. Press [Up] or [Down] to locate a **Group** to modify, and press [Enter] to select.
4. Press [Up] or [Down] to scroll the options, **Unaffected** or **Shut-Off**, and press [Enter] to select.
5. Repeat for all the groups you want to configure.

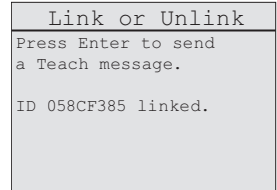
Holiday Shut-Off Duration

Set the Holiday Shut-Off duration, from one to seven days. The default shut-off duration is one day.

1. Select **Start Holiday Shut-Off** from the Holiday Shut-Off menu and press [Enter].
2. Press [Down] to focus on **Shut-Off for** and press [Enter] to modify.
3. Press [Up] or [Down] to change the number of days (1–7), and press [Enter] to select.

Link or Unlink

Echoflex devices that are part of an installed solution may be configured during the Echoflex pre-commissioning process or at any time using Garibaldi Pro software. A number of the parameters can be configured from the devices themselves (see relevant documentation for details). The WTC also provides a means of linking or unlinking controllers. See [Organize on page 8](#) for planning information.



The WTC sends a Teach message to Link or Unlink to a controller. The target controller must be installed, powered, and within range of the WTC.

1. Press the [Learn] button on the controller to activate Link Mode.
2. Select **Link or Unlink** and press [Enter].
3. Press [Enter] again to send a Teach message. "(TX)" flashes to confirm a Teach message is transmitted. The controller's radio ID displays as being Linked.



Note: *The linking process is also used to unlink controllers. If you send a second Teach message, the controller's ID shows as Unlinked.*

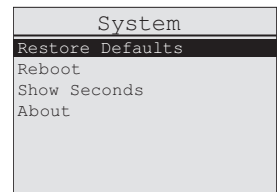
System

Use the System menu to access settings that control the WTC.

Restore Defaults

There are two levels for defaults you can restore.

- Pre-commissioned: preserves only the pre-commissioned links and settings.
- Factory: removes everything, a complete reset.



CAUTION: *All manual settings will be lost and cannot be retrieved.*

1. Select **Restore Defaults** from the System menu, and press [Enter].
2. Press [Up] or [Down] to scroll **Pre-commissioned** or **Factory**, and press [Enter] to select.
3. Press [Up] or [Down] to scroll **Yes** or **No** to confirm, and press [Enter] to select.

Reboot

1. Select **Reboot** from the System menu, and press [Enter].
2. Press [Up] or [Down] to scroll **Yes** or **No**, and press [Enter] to select.

Show Seconds

Set the time display to include seconds.

1. Select **Show Seconds** from the menu, and press [Enter] to modify.
2. Press [Up] or [Down] to scroll **Yes** or **No**, and press [Enter] to select.



Note: *If you restore the pre-commissioned or factory defaults, it does not change your Show Seconds preference.*

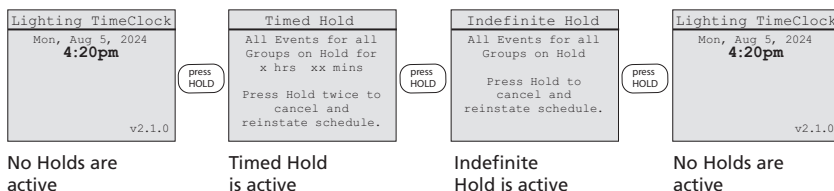
About

To display the firmware and build number, select **About** from the System menu, and press [Enter] to display the firmware and build number.

Hold Options

The Hold feature suspends all scheduled events and allows manual lighting control to persist. Press the [Hold] button to cycle through the two Hold types: Timed Hold and Indefinite Hold described below. Hold applies to all groups.

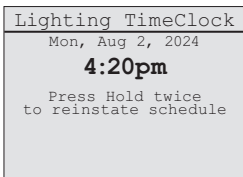
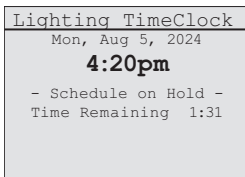
The Holiday Shut-Off feature is an additional type of Hold that is configured from the main menu. Groups can be included or excluded from Holiday Shut-Off. For more information, see [Holiday Shut-Off on page 20](#).



Timed Hold

A Timed Hold suspends all scheduled events for a configurable period of time. A countdown of the Time Remaining displays on the Home Screen.

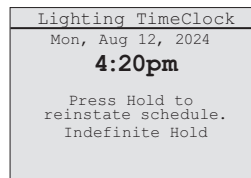
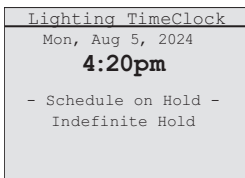
The default Timed Hold duration is two hours (120 min). See [Timed Hold on page 19](#) to modify the Timed Hold duration to a value between 10 and 960 minutes.



1. Press [Hold] once to activate a **Timed Hold**.
2. Press [Hold] twice to clear.

Indefinite Hold

An Indefinite Hold suspends all scheduled events until it is manually cleared. When the Hold is cleared, scheduled events are reinstated.



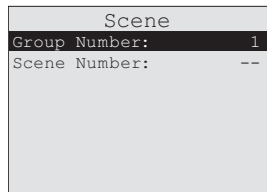
1. Press [Hold] once if a **Timed Hold** is already active.
2. Press [Hold] twice to apply an **Indefinite Hold** for all scheduled events.
3. Press [Hold] once to clear.

Recall Preset

The Recall Preset feature provides an easy way to manually activate a scene. Press the [Recall Preset] button to enter a Group Number and Scene Number.

If you manually activate a scene, the setting will replace any scheduled event that is active.

Use [Up] or [Down] to scroll, and [Enter] to select a Group Number and Scene Number. Press [Back] to exit the menu. The Scene Number display returns to "--" after you exit.



Record of Numbered Elements

Use the following tables to record the configured settings for each numbered element. Consider posting or sharing the information to inform users who need to know the settings.

Configured Events 1 to 50

Number	Description	Number	Description
Event 1		Event 26	
Event 2		Event 27	
Event 3		Event 28	
Event 4		Event 29	
Event 5		Event 30	
Event 6		Event 31	
Event 7		Event 32	
Event 8		Event 33	
Event 9		Event 34	
Event 10		Event 35	
Event 11		Event 36	
Event 12		Event 37	
Event 13		Event 38	
Event 14		Event 39	
Event 15		Event 40	
Event 16		Event 41	
Event 17		Event 42	
Event 18		Event 43	
Event 19		Event 44	
Event 20		Event 45	
Event 21		Event 46	
Event 22		Event 47	
Event 23		Event 48	
Event 24		Event 49	
Event 25		Event 50	

Configured Groups 1 to 24

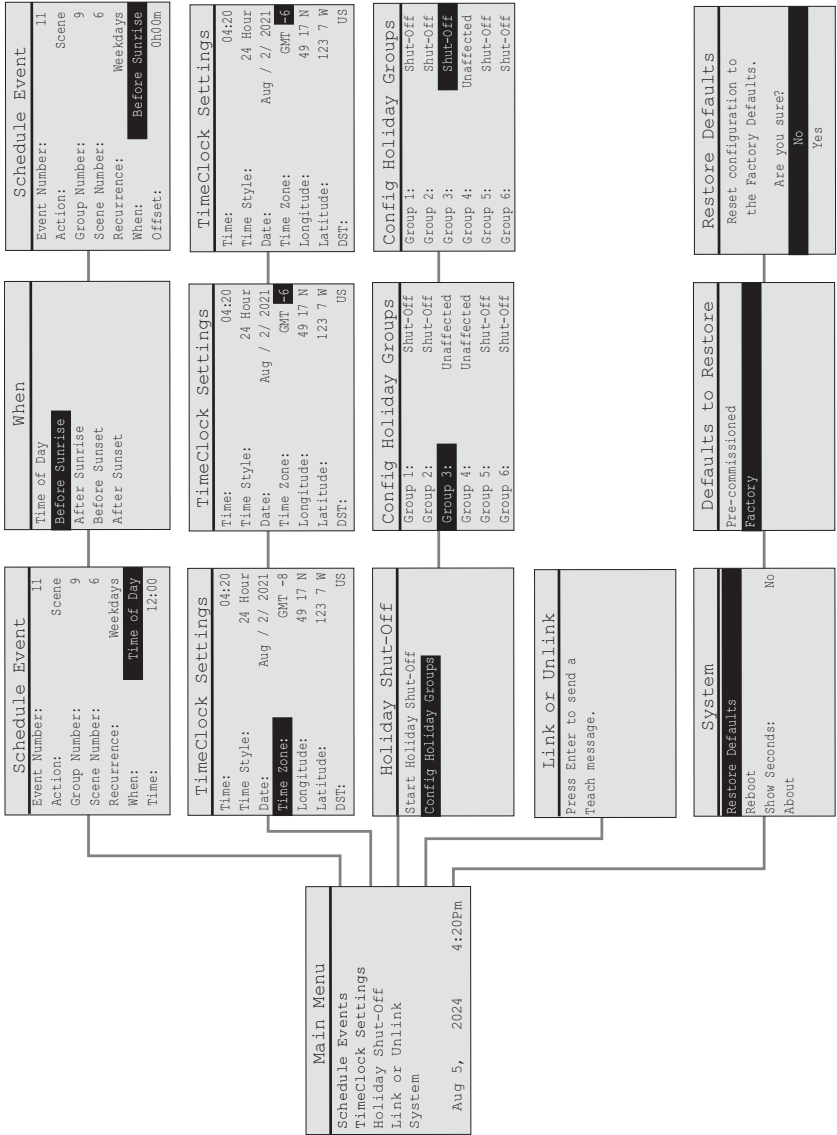
Number	Description	Number	Description
Group 1		Group 13	
Group 2		Group 14	
Group 3		Group 15	
Group 4		Group 16	
Group 5		Group 17	
Group 6		Group 18	
Group 7		Group 19	
Group 8		Group 20	
Group 9		Group 21	
Group 10		Group 22	
Group 11		Group 23	
Group 12		Group 24	

Configured Scenes 1 to 15

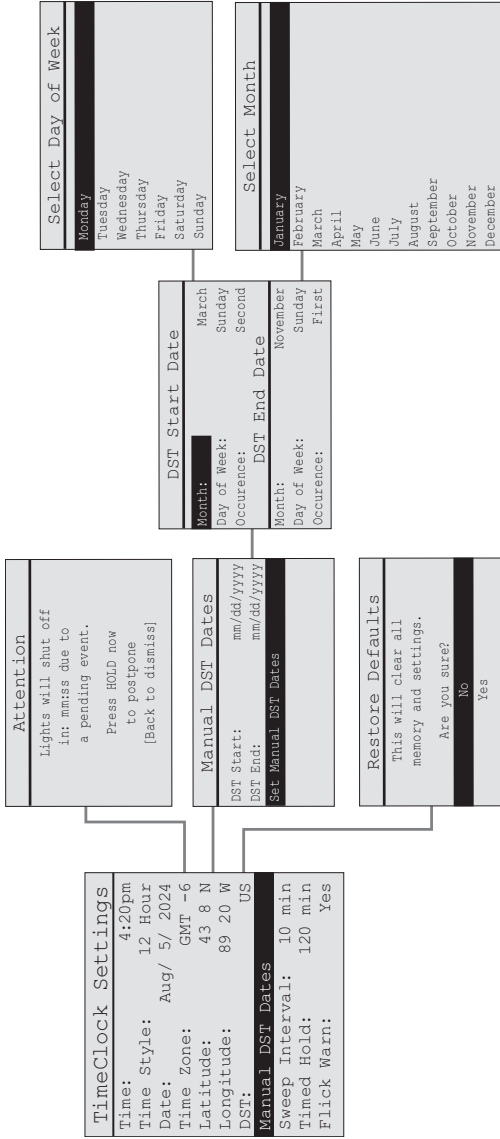
Number	Description	Number	Description
Scene 1		Scene 9	
Scene 2		Scene 10	
Scene 3		Scene 11	
Scene 4		Scene 12	
Scene 5		Scene 13	
Scene 6		Scene 14	
Scene 7		Scene 15	
Scene 8			

Menu Flow Examples

Main Menu



Manual DST Dates



Status Messages - Holds

Status Screen

Lighting TimeClock
Mon, Aug 5, 2024
4:20pm
v2.1.0

Hold Screen
Variants



Lighting TimeClock
Mon, Aug 5, 2024
4:20pm
-Schedule on Hold-
Time remaining 9:45

Lighting TimeClock
Mon, Aug 5, 2024
4:20pm
-Schedule on Hold-
-in Group 2-
Time remaining 9:45

Timed Hold
All Events for all Groups on Hold for x hrs xx mins Push Hold twice to cancel and reinstate schedule.

Indefinite Hold
All Events for all Groups are on Hold Push Hold to cancel and reinstate schedule.

Lighting TimeClock
Mon, Aug 5, 2024
4:20pm
-Holiday Shut-Off-
-Schedule on Hold-
Time remaining 9:45

Compliance

For current and complete compliance information, see the Echoflex Wireless TimeClock datasheet at echoflexsolutions.com.

FCC Compliance

Echoflex Wireless TimeClock

(For any FCC matters):

Echoflex Solutions, Inc.

3031 Pleasant View Road

Middleton, WI 53562

+1 (608) 831-4116

echoflexsolutions.com

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Any modifications or changes to this product not expressly approved by Electronic Theatre Controls, Inc. could void the user's authority to operate the product. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

Contains FCC ID: SZV-TCM551U

ISED Compliance

This device contains a license-exempt transmitter/receiver that complies with Innovation, Science, and Economic Development Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Contains IC ID: 5713A-TCM515U

Conformité ISDE

Cet appareil contient un émetteur/récepteur conforme aux CNR d'Innovation, Sciences et Développement économique Canada (ISDE) applicables aux appareils radio exempt de licence. Son fonctionnement est soumis aux deux conditions suivantes:

1. L'appareil ne doit pas produire d'interférences.
2. L'utilisateur de l'appareil doit accepter toute interférence, même si l'interférence est susceptible d'en compromettre le fonctionnement.

Contient ID IC: 5713A-TCM515U



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